

Applicant : Coury et al.  
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Attorney's Docket No.: 00986-086001 / 5182

### REMARKS

Claims 38-53 are currently pending in this application. No amendments to the claims are made herein. If a Petition for Extension of Time is needed, this paper is to be considered such Petition.

### **REJECTION OF CLAIMS 38-53 UNDER 35 U.S.C. § 103(a) OVER ZAJACZKOWSKI IN VIEW OF HUBBELL ET AL.**

The Office Action has rejected claims 38-53 under 35 U.S.C. § 103(a) for allegedly being obvious over Zajaczkowski (US Patent No. 5,726,250) in view of Hubbell et al. (US Patent No. 5,410,016). Applicant respectfully traverses this rejection.

In describing Zajaczkowski, the Office Action states "Zajaczkowski teaches a crosslinked water-absorbent copolymers...The crosslinking may be realized by employing polyfunctional macromers or monomers." See the office action, page 2, lines 17-23. Applicants respectfully disagree with the Office Action's above characterization of Zajaczkowski. Zajaczkowski does not teach or suggest that crosslinking may be carried out using polyfunctional macromers or monomers. Zajaczkowski discloses a water-absorbent graft copolymer formed from one or more water-soluble base monomers A, a water-soluble or water-dispersible macromer C, and optionally one or more B monomers copolymerized with the A monomer. The macromers and monomers are copolymerized to form a graft copolymer. After the graft copolymer is prepared, it is then crosslinked by using crosslinking agents. See column 2, line 37 to column 3, line 8; column 6, lines 52-62; column 9, lines 58-59 and 63-67. Zajaczkowski forms a graft copolymer using macromers with a single polymerizable group and monomers to form a non-crosslinked graft copolymer and then crosslinks the graft copolymer with a minor amount (0.02 to 2% by weight) of added crosslinking agents.

The Office Action states at page 3, line 18 to page 4, line 3:

A person of ordinary skill in the art would have been motivated to employ the macromers as disclosed by Hubbell et al. to make the crosslinked water-absorbent copolymers because of the advantage disclosed by Hubbell [sic], e.g., biocompatible, biodegradable, polymerizable, and further the macromer has more than one

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polymerizable groups, meet the requirement for internal crosslinking as defined by Zajaczhowski, and provide a means of crosslinking. Further, the macromer has similar molecular weight and components to those employed by Zajaczhowski, and is particularly known to be useful in forming materials suitable for tissue adhesive wound dressing and controlled release.

Applicants respectfully disagree. Contrary to the Office Action's above assertion, Zajaczhowski does not teach that the macromer should have more than one polymerizable group for internal crosslinking. Zajaczhowski states "[t]he crosslinking reaction which is contemplated is covalent by nature and may be achieved by incorporating into the polymerization mixture (for internal crosslinking) a polyfunctional ethylenically unsaturated compound in an amount sufficient to provide the desired crosslinking." See column 6, lines 55-60. Zajaczhowski elaborates the types of internal crosslinking agents to be added to the reaction mixture to be di- or triesters of (meth)acrylic acid, di- or poly-alkylene glycol (meth)acrylates, alkylene bis(meth)acrylamides and n-(isobutoxymethyl)acrylamide. Zajaczhowski does not teach or suggest using a macromer with more than one polymerizable group, it only teaches various internal crosslinking agents that can be added to the graft copolymer for crosslinking. Thus, there is no motivation for a person of ordinary skill in the art to substitute the macromers of Hubbell for the macromer of Zajaczhowski to form a graft copolymer.

Even if, as per the Office Action's proposal, a person of ordinary skill were to substitute the macromers (having a single polymerizable group) of Zajaczhowski with the macromers of Hubbell (having more than one polymerizable group) the resulting graft copolymer would not have the composition or desired properties of Zajaczhowski's graft copolymer. Note that Zajaczhowski adds only 0.02-2% by weight of the crosslinking agent and only after the graft copolymer is formed. The nature and degree of crosslinking of a graft copolymer would be different if the macromer were to crosslink the polymer backbone instead of the minor amount crosslinking agent added after formation of the graft copolymer. Zajaczhowski's crosslinked water-absorbent graft copolymer is a solution (liquid). This solution may be converted to a tacky residue, foamed to provide a foamed layer, or injection molded to produce a molded foam article. See column 8, line 6 to column 9, line 9. Replacing the Zajaczhowski's macromer with Hubbell's macromer would lead to crosslinking in the graft copolymer to form a solid not a

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liquid. This resulting solid graft copolymer would not function as a tissue adhesive, wound dressing or sustained release device as required by Zajaczhowski. Thus, even if, as pointed out by the Office Action, the molecular weight range of Hubbell's macromers are in the same range as Zajaczhowski's macromers, because the end product would be completely different a person of ordinary skill would not be motivated to combine the prior art references and even if combined the result would not be successful.

Applicants would like to point out that a rejection under 35 U.S.C §103 based upon a modification of a reference that destroys the intent, purpose or function of the invention disclosed in the reference, is not proper and a prima facie case of obviousness cannot be properly made. Accordingly, Applicants request reconsideration and withdrawal of this rejection.

**REJECTION OF CLAIMS 38-53 UNDER 35 U.S.C. § 103(a) OVER ZAJACZKOWSKI  
IN VIEW OF JARRETT ET AL.**

The Office Action has rejected claims 38-53 under 35 U.S.C. § 103(a) for allegedly being obvious over Zajaczkowski (US Patent No. 5,726,250) in view of Jarrett et al. (WO 98/12243). Applicant respectfully traverses this rejection.

The Office Action has applied Jarrett in the same way as Hubbell, stating that it would be obvious for a person of ordinary skill to replace Zajaczhowski's macromers with Jarrett's macromers to make the crosslinked water-absorbent copolymers. Applicants respectfully disagree. Combining Zajaczhowski with Jarrett does not solve the infirmities of combining Zajaczhowski with Hubbell. Jarrett discloses macromers having more than one polymerizable group. Replacing Zajaczhowski's macromers with Jarrett's macromers would result in a solid product due to greater crosslinking as indicated for Hubbell's macromers in the previous section. So a person of ordinary skill would not be motivated to replace the Zajaczhowski's macromers with Jarrett's macromers and even if one of ordinary skill were to do so the resulting product graft copolymer could not be used for the purpose of Zajaczhowski. Accordingly, Applicants request reconsideration and withdrawal of this rejection.

Applicants believe the application is in condition for allowance, which action is requested.


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Please apply any charges, including the charge for a three-month extension of time, or credits to deposit account 06-1050, referencing Attorney's Docket No. 00986-086001.

Respectfully submitted,

Date: 3/9/05

  
Dale L. Rieger  
Reg. No. 43,045

Fish & Richardson P.C.  
12390 El Camino Real  
San Diego, CA 92130  
Telephone: (858) 678-5070  
Facsimile: (858) 678 5099

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